WASHINGTON STATE DEPARTMENT OF GAME
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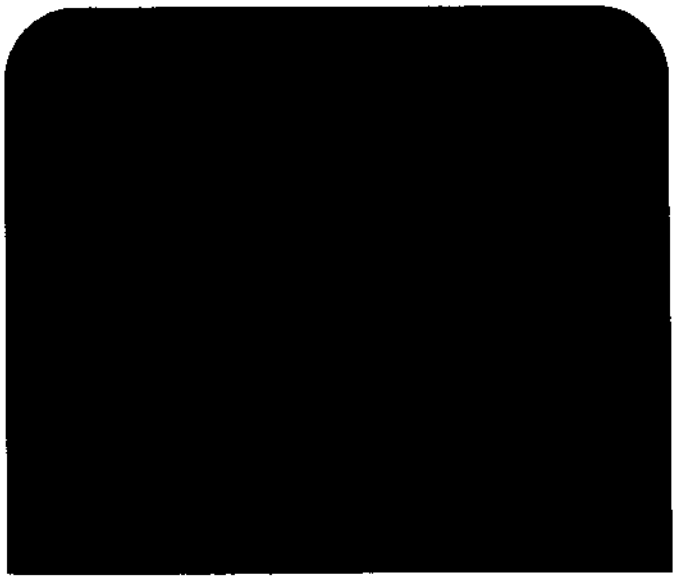


WASHINGTON

DEPARTMENT OF GAME

AN EQUAL OPPORTUNITY EMPLOYER

A MEMBER OF THE INTERNATIONAL ASSOCIATION OF GAME, FISH AND CONSERVATION COMMISSIONERS

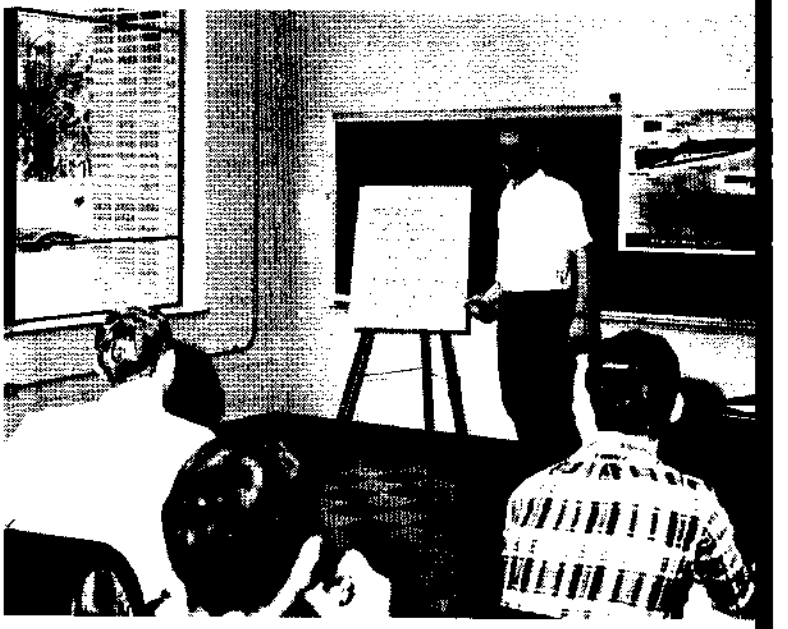
A Word to Prospective Natural Resource Managers . . .

This brochure will help you plan for a career in the conservation of renewable natural resources. While it is directed mainly at a career in fish or wildlife management, it also will help you plan for a career in forestry, outdoor recreation, range management and other resource specialties.

Whether you wish to become a forest ranger, a park naturalist, a fishery or wildlife biologist, a conservation law enforcement officer or a watershed manager, your opportunities for a career in conservation will be few unless you become a professional. And this means a college education.

That education should be broad enough to provide an understanding of the inter-relationships of the natural resources which make up the environment; the social, political and economic forces that influence natural resource management; and the ability to analyze natural resource problems to find realistic alternative solutions.

Your Career Begins in High School



Inter-related Specialties

Frequently there are combination positions that require knowledge in one natural resource field plus knowledge in one or more related fields. An example would be journalism, plus fish and wildlife, for specialization in fish and wildlife information and education work. Prospective students should not overlook opportunities in combination fields, such as:

Wildlife-Police Administration	**Conservation Officer**
Wildlife-Education	**Conservation Education Specialist**
Fisheries or Wildlife-Public Administration	**Personnel Officer Budget Officer Planning Officer**
Forestry-Recreation	**Recreation Specialist**

High school is none too soon for you to begin building a sound foundation. Career preparation often starts with personal motivation expressed in hobbies and spare time activities, such as hunting, fishing, bird watching, insect collecting, nature photography and woodcraft. Many useful skills can be developed in this way. Recognize, however, that while natural resource managers enjoy their work, it **is** work, not a life-long vacation with pay.

In planning a high school program, emphasize courses in biology, chemistry, physics, and mathematics. Also gain a background in such subjects as social and earth sciences, history and geography. It would be hard to find another field in which the scientific specialist bears so much responsibility for putting his recommendations and "know-how" into language clearly comprehensible to his fellow citizens. Almost every conservation worker is expected to address service clubs, sportsmen's groups and other civic organizations so the communications skills are most important. This means knowledge of literature and composition. Extra-curricular participation in debate, school newspaper and yearbook are most desirable.

CAREER PREPARATION AT LIBERAL ARTS, STATE AND JUNIOR COLLEGES

The level of education and training required by the natural resource agencies varies. Some agencies employ Bachelor degree graduates while others require Master degree graduates for most of their technical work.

If you plan to attend a junior college, a state college or a liberal arts college with the idea of transferring at some point in your education to a university that offers degrees in natural resource fields, you should select that university early. Write to the university registrar and ask for their catalog. With the aid of your counselor, select courses that will be accepted later for credit at the university of your choice. Do not attempt in your first two years to take highly specialized courses even if they are offered. Concentrate rather on required and elective courses in the fields of communication skills, humanities, social sciences, mathematics and introductory physical and biological sciences.

Avoid specialization during the undergraduate years if you are looking forward to graduate study. If possible, take four years in a liberal arts program where you can obtain a broad general knowledge and develop your intellectual capacities. Then qualify for at least a master's degree at the university offering such degrees. At least one year of study after obtaining the Bachelor of Science degree is regarded as essential for thorough professional training.

Careful consideration should be given to the particular college and degree program by the student planning a career in natural resources conservation.

Generally, the greater your depth and breadth of training, the better will be your opportunities for employment and advancement.

Planning Your Major

As a base for your major, your first three years of undergraduate education should include the following courses: introductory courses in botany, zoology, geology, chemistry, physics, economics, statistical analysis, political science, psychology and foreign language as well as English composition and analytical geometry and calculus.

Once you have this base (and other courses from among those described below as "Recommended Supplementary Course Work"), you should choose a major — one of the most important decisions a student must make.

Having selected your major, you will be required, as a rule, to complete advanced and more specialized course work in your chosen field or discipline. This special course work usually will require at least two semesters or three "quarters" of study. If the major is zoology, for example, specialty courses might include vertebrate and invertebrate zoology, physiology, anatomy, embryology, genetics, systematics and speciation.

Make certain you include course work which will give you an understanding and an appreciation of the inter-relationships of all the natural resources.

Again, your choice of the university at which you will specialize is exceedingly important. In making your selection, you would obtain professional counseling. The Society of American Foresters can provide a list of accredited universities for those interested in forestry. Similarly, the Executive Secretaries of the American Fisheries Society and of The Wildlife Society can recommend universities for those whose majors are in the fields of fisheries or wildlife biology or management.

In pursuing your major, plan to take one or more of several courses at a field or biological station.

Actual field experience in the conservation field is valuable. Try to secure summer employment on a field crew making stream or wildlife surveys or at a park or fish hatchery.

Recommended Supplementary Course Work

Elective courses should be taken to broaden your training in your major field. For example, soils — often not a required course — would be valuable to a fisheries major. Similarly, electives in agricultural economics and rural sociology would be valuable to the resource manager working in farming areas. Additional courses in communications, speech and technical writing are highly recommended for all students majoring in the natural resource sciences. Surveying would be helpful to the forester, refuge or park manager.

How About Graduate Work?

Many positions in the fish and wildlife conservation field, especially the more challenging and responsible ones, require education beyond the Bachelor degree level. Generally, these positions offer greater opportunities for advancement. They include positions in research, teaching, management and administration. At an early date in your training, consider the desirability of taking graduate studies to secure a master's or a doctor's degree. You should discuss the matter with your dean.

Undergraduate grades are important. Most universities require a B-grade average of the undergraduate for acceptance into graduate school.

The well-trained person holds the advantages for professional opportunities of the future. The more exciting and challenging positions also are those which entail greater responsibilities. These, too, offer more opportunities for advancement and often are most available to those with more thorough and specialized training.

In-service training, job experience and formal education beyond the Bachelor's degree level all help to elevate the individual's professional competence. Graduate study is particularly important in research or highly technical work. Thus, the conscientious student of natural resource conservation must give serious thought to the role of graduate study in career planning.

Other Sources of Information

The Wildlife Society, Suite S-176, 3900 Wisconsin Avenue, N.W., Washington, D. C. 20016

American Fisheries Society, 5410 Grosvenor Lane, Bethesda, MD 20014

Society of American Foresters, 5410 Grosvenor Lane, Bethesda, MD 20014

Office of Information, Bureau of Land Management, U. S. Department of the Interior, Washington, D. C. 20240

Office of Information, Soil Conservation Service, U. S. Department of Agriculture, Washington, D. C. 20250

Bureau of Sport Fisheries & Wildlife, U.S.D.I., Washington, D. C. 20240

National Marine Fisheries Service, Washington, D. C. 20240

National Park Service, U.S.D.I., Washington, D. C. 20240

Canadian Wildlife Service, Ottawa, Ontario KIA OH3

Public Relations Department, Olin Industries, 460 Park Avenue, New York, New York 10022

"Careers in Conservation" by H. Clepper ($3.75), Ronald Press Company, 15 East 26 Street, New York, New York 10010

Job Opportunities in State, Federal and Private Organizations

The major employers of natural resource specialists are the state conservation agencies. In your home state, these would be your state Department of Natural Resources, State Conservation Department or Departments of Game and Fish, Parks and Forestry.

The federal government also is a major employer of natural resource managers and scientists. Within the Department of the Interior, this includes the Bureaus of Land Management, Outdoor Recreation, Indian Affairs, Sport Fisheries and Wildlife, Commercial Fisheries and Reclamation, the National Park Service and the Federal Water Pollution Control Administration. Within the Department of Agriculture, this includes the Forest Service, Soil Conservation Service and the Extension Service. The U. S. Army Corps of Engineers also employs resource specialists, as do the Department of Health, Education and Welfare and the Atomic Energy Commission.

In more densely populated areas of the nation, city and county governments now employ resource specialists. A number of the more progressive private utilities and landholding corporations engaged in lumber, paper and mining operations now employ trained resource specialists.